

## 5.0 PRE-START CHECKLIST

The Pre-Start Checklist items are to be completed by the RI during the Pre-Start meeting at the job site.

Responsible Individual: \_\_\_\_\_

Date Prepared: \_\_\_\_\_

Permit #: \_\_\_\_\_

WO: \_\_\_\_\_

Signature: \_\_\_\_\_

YES	NO	COMMENTS
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### UNDERGROUND INSTALLATION (SEWER, TELEPHONE, FUEL, ELECTRIC, WATER LINES, ETC.)

1.	Have all personnel been briefed on the scope, hazards, controls and limiting conditions in the Penetration Permit?			
2.	Have all personnel been briefed regarding the underground utility markings?			
3.	Is the plan in place to adequately guard and support the utilities that need to be maintained in operation?			
4.	Has an outage for utility isolation been performed? Are LOTO locks and tags installed? Describe:			

### STABILITY OF ADJACENT STRUCTURES

5.	For excavations that will dig below the level of sidewalks, utilities, foundations, retaining walls, etc do they meet the following criteria? a. Is the excavation adequately supported (i.e., underpinning)? b. Is the excavation in stable rock? c. Has a registered professional engineer determined that the structure is sufficiently removed from the excavation so as to be unaffected by the excavation activity. d. Has a registered professional engineer determined that the excavation poses no hazard to employees?			

### INSPECTIONS

6.	Will there be daily pre-start inspections of the excavation(s) site by the RI and General Constructor documented by the RI and/or LBNL Construction Safety Engineer?			
7.	Will there be inspections of each excavation site documented on an as-needed basis to check for evidence of the failure of protective systems, or the accumulation of hazardous atmosphere and other hazardous conditions?			
8.	Will there be inspections of each excavation site documented after every rainstorm or other occurrence which may increase hazards?			
9.	Have adequate precautionary measures been implemented to protect workers where there is evidence of a potential hazard to employees working in and around an excavation.			
	Describe:			

YES	NO	COMMENTS
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**CONCRETE PENETRATION**

10.	Describe PPE to be used by personnel performing penetration such as safety gloves, safety shoes, safety glasses, ground fault interruption & respirators, etc.:			
11.	Does the working area require barricades? If yes, are they in place?			
12.	Have all special requirements for water and dust control been met?			
13.	Is there adequate ventilation in the work area?			
14.	Is there adequate lighting in the work area?			

**HAND DIG ONLY**

15	Is excavation within 30" of a marked or exposed utility?  Excavation within a 30 inch radius of the marked or exposed utility must be excavated by hand using appropriate safe technology, such as an air knife, shovel, vacuum, chipping gun with a spade bit, breaker bar or high pressure water excavation. Drills, circular saw, jack hammer, boring equipment, coring equipment, concrete saw, pick, backhoe, or any power excavation machine is not allowed.			
16	Has Plant Operations Department Head's approval been documented for destructive means of excavation within 30" radius of marked or exposed utility?			
	Describe mitigation measures:			

**HOLD POINT ADMINISTRATION**

17	<p><b>Pothole Excavation:</b></p> <p>After underground utilities are located, the subcontractor shall HOLD and notify the RI. The RI may release the HOLD if the RI verified that the subcontractor have installed reference points consisting of brass nail and hub/flagging at all changes in grade or alignment of the exposed utilities. The Subcontractor shall keep a separate written record referenced to each point with the following information:</p> <ul style="list-style-type: none"> <li>(1) Offset and depth to top and centerline of utility, accurate to 0.1 feet</li> <li>(2) Type of utility (i.e. gas, water, etc.)</li> <li>(3) Size of utility (i.e. 2", 4", 16" wide duct, etc.)</li> <li>(4) Type of material of utility (i.e. cast iron, PVC, etc.)</li> </ul> <p>Backfill with sand and mark results on the ground surface near the pothole with white spray paint. Backfill immediately or install protective cover to prevent tripping or falling into hole.</p>
18	<p><b>Surface Excavation:</b></p> <p>Three working days before backfilling, the Responsible Individual shall notify the LBNL subcontracted Surveyor to obtain the three-dimensional coordinates of all buried utilities. Buried utilities including the pipeline and any other utilities exposed during construction shall not be covered with backfill without the prior approval of the RI. Coordination of this survey requirement is the responsibility of the Subcontractor. LBNL subcontracted Surveyor will be provided by the University when scheduled. The cost for delay or dig-up related to the Subcontractor's failure to schedule the utility survey shall be paid by the Subcontractor.</p>

